CHAPTER 6

FUTURE DIRECTIONS IN THE OCOEE RIVER WATERSHED

6.1 BACKGROUND.

The Watershed Management Plan serves as a comprehensive inventory of resources and stressors in the watershed, a recommendation for control measures, and a guide for planning activities in the next five-year watershed cycle and beyond. Water quality improvement will be a result of implementing both regulatory and nonregulatory programs.

In addition to the NPDES program, some state and federal regulations, such as the TMDL and ARAP programs, address point and nonpoint issues. Construction and MS4 stormwater rules (implemented under the NPDES program) are transitioning from Phase 1 to Phase 2. More information on stormwater rules may be found at: http://www.state.tn.us/environment/wpc/stormh2o/MS4.htm.

This Chapter addresses point and nonpoint source approaches to water quality problems in the Ocoee River Watershed.

6.2. COMMENTS FROM PUBLIC MEETINGS. Watershed meetings are open to the public, and most meetings were represented by citizens who live in the watershed, NPDES permitees, business people, farmers, and local river conservation interests. Locations for meetings were chosen after consulting with people who live and work in the watershed. Everyone with an interest in clean water is encouraged to be a part of the public meeting process. The times and locations of watershed meetings are posted at: http://www.state.tn.us/environment/wpc/public.htm.

6.2.A. Year 1 Public Meeting. The first Ocoee River Watershed public meeting was held October 3, 1996 at the Ducktown Elementary School. The goals of the meeting were to 1) present, and review the objectives of, the Watershed Approach, 2) introduce local, state, and federal agency and nongovernmental organization partners, 3) review water quality monitoring strategies, and 4) solicit input from the public.

Major Concerns/Comments

- Voluntary NPS improvements
- Loss of fish diversity due to road projects
- Loss of use of Upper Ocoee River for recreation
- Loss of recreational dollars if water quality declines
- Siltation

6.2.B. Year 3 Public Meeting. The second Ocoee River Watershed public meeting was held May 5, 1998 at Ducktown Elementary School. The goals of the meeting were to 1)review the watershed approach, 2)summarize the monitoring strategy, 3)review the most recent water quality assessment, 4)discuss the TMDL schedule and citizens' role in commenting on draft TMDLs, and 5)review BMPs and other nonpoint source tools available through the Tennessee Department of Agriculture 319 Program and NRCS conservation assistance programs.

Major Concerns/Comments

- Effectiveness of BMPs for forestry
- Sediment behind Ocoee Dam #1
- Effectiveness of constructed wetlands in the watershed
- Highway 64 expansion
- Poor advertisement for meeting
- Legality and necessity of holding watershed meetings

6.2.C. Year 5 Public Meeting. The third Ocoee River Watershed public meeting was held August 5, 2002 at the Polk County Courthouse (Benton). The meeting featured three educational stations:

- Draft Watershed Water Quality Management Plan
- Benthic macroinvertebrate samples and interpretation
- Landowner Assistance Programs (NRCS and TDA)

An additional six educational stations could not be viewed due to a power outage.

In addition, citizens had the opportunity to make formal comments on the Draft Year 2002 303(d) List.

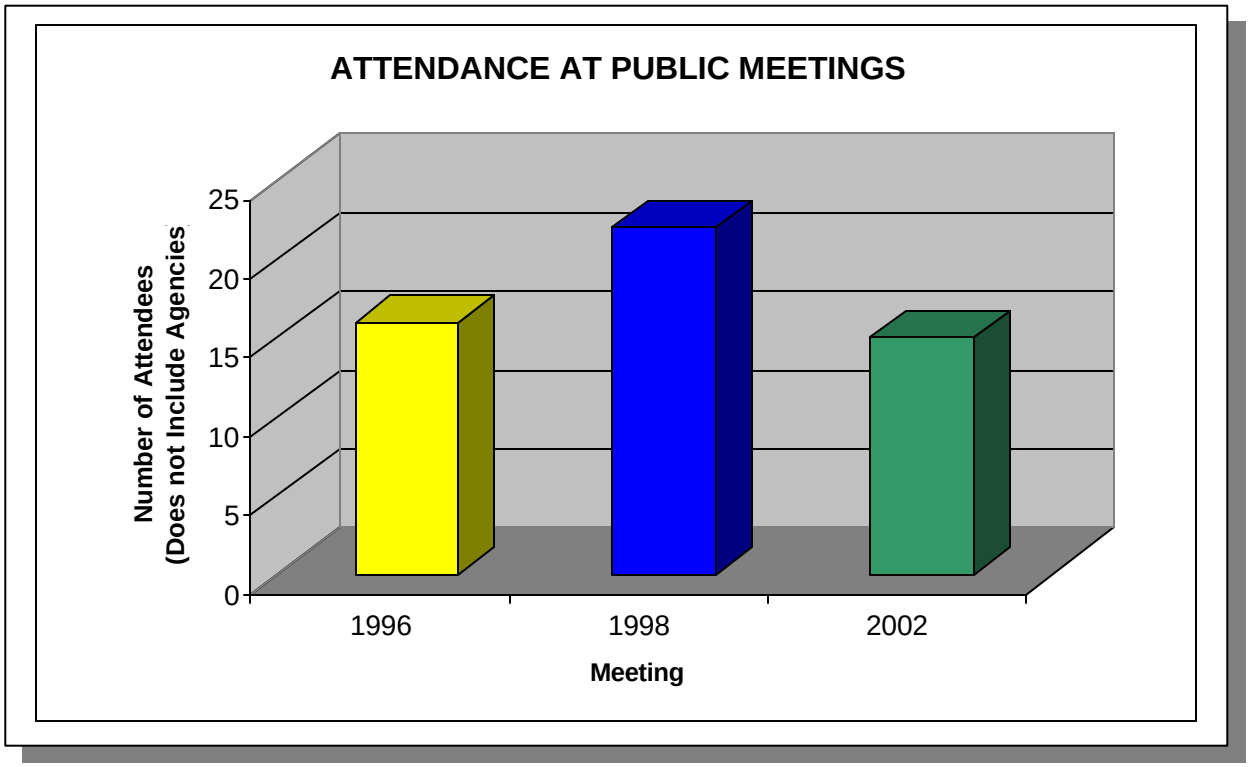

Figure 6-1. Attendance at Public Meetings in the Ocoee River Watershed. *Attendance numbers do not include agency personnel.*

6.3. ASSESSMENT OF NEEDS.

6.3.A. Point Sources. Point source contributions to stream impairment are primarily addressed by NPDES and ARAP permit requirements and compliance with the terms of the permits. Notices of NPDES and ARAP draft permits available for public comment can be viewed at http://www.state.tn.us/environment/wpc/wpcppo/index.html. Discharge monitoring data submitted by NPDES-permitted facilities may be viewed at http://www.epa.gov/enviro/html/pcs/pcs_query_java.html.

The watershed approach applies to point sources in the watershed by placing all individual wastewater discharge permits within the same year of a 5-year cycle for issuance and renewal. Increased consideration will be given to cumulative effects of multiple dischargers into receiving waters since all of the permits in a watershed will be on the same yearly cycle. Future TMDLs will also factor into permit issuance.

NPDES permits are also required for storm water point source discharges from construction sites (disturbing at least 5 acres, or smaller sites of disturbance on a cause basis) and from industrial sites categorized by federal regulation. These storm water discharges are covered by general NPDES permits which are not issued on a watershed specific basis in most cases. Construction sites that disturb greater than 1 acre will require permits in 2003. Regardless of the size, no construction site is allowed to cause a condition of pollution. Urban runoff from cities with populations under 100,000 are currently exempt from NPDES storm water regulations. Metropolitan areas and cities with populations greater than 10,000 and appropriate densities will be required to obtain NPDES storm water permits in 2003. The Ocoee watershed does not contain any urban areas subject to these storm water permits for cities.

The purpose of the TMDL program is to identify sources of pollution—both point and nonpoint—accurately and to allocate pollution control needs in places where water quality goals are still not being achieved. TMDL studies are tools that allow for a better understanding of load and/or wasteload reductions necessary for impaired streams to return to compliance with water quality standards.

TMDL development is a federal Clean Water Act requirement. So is the techincal assessment process which requires states to develop specific documents for reporting on the status of water quality and for reporting on waters that do not fully meet their designated uses (see Chapter 3 regarding the 305b report and 303d list). Waters that are impaired may be candidates for TMDL development, although not all waters and/or sources of impairment are best suited for such development as other corrective actions may be more appropriate.

Since the Ocoee River and its main tributary watersheds within the Copper Basin do not meet some of Tennessee's classified use criteria, TMDL development in the Ocoee watershed will be focused on this non-attainment region. Due to the magnitude and complexity of adverse water quality impacts, EPA will be the lead agency for TMDL development for the Ocoee River and its impaired tributaries in the Copper Basin. More information about Tennessee's TMDL program may be found at:
http://www.state.tn.us/environment/wpc/tmdl.htm

TMDLs are prioritized for development based on many factors.

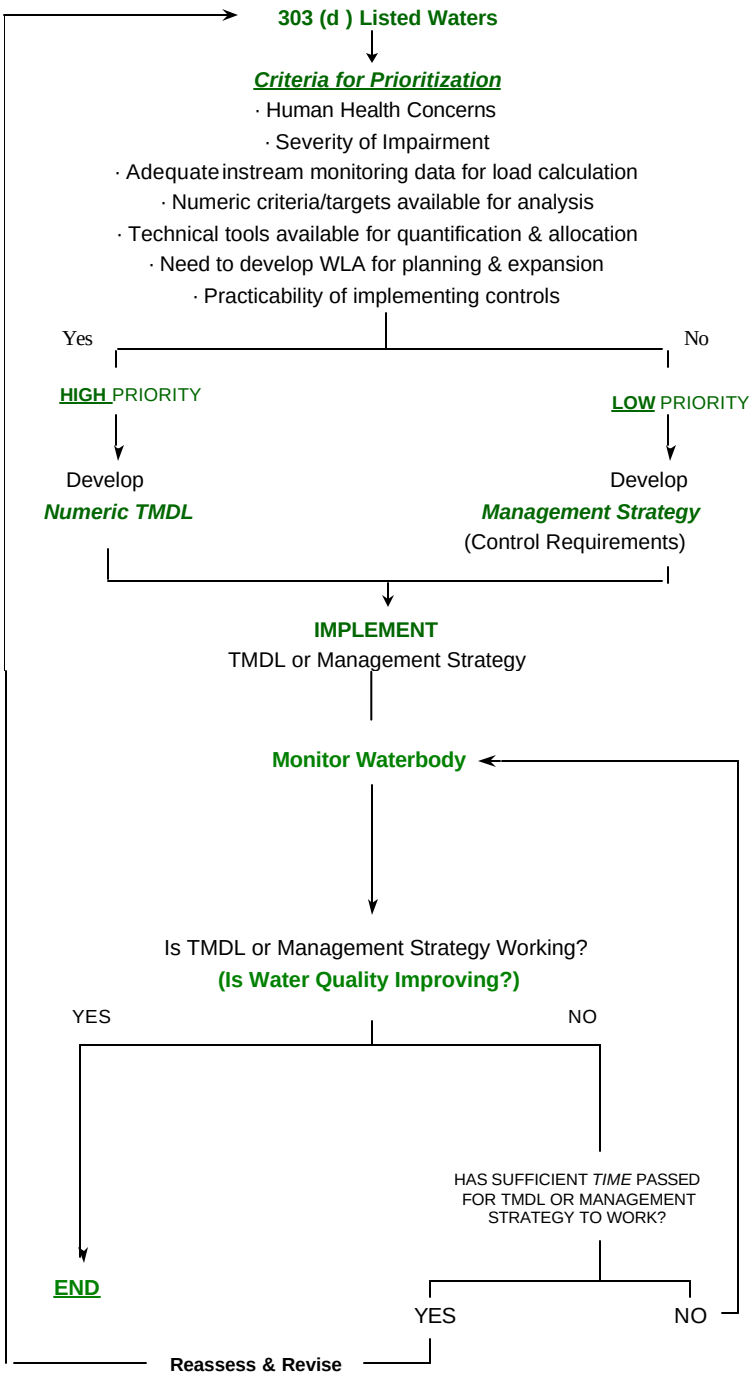

Figure 6.2. Prioritization scheme for TMDL Development.

The Tennessee Department of Environment and Conservation, the U.S. Environmental Protection Agency, and Glenn Springs Holdings, Inc. are cooperatively working on the Copper Basin Project.

Mining and related activities have resulted in the environmental degradation of portions of the Copper Basin, including the North Potato Creek Watershed, the Davis Mill Creek Watershed, and parts of the Ocoee River. Acidic conditions and leaching metals have impaired water quality and deforestation has resulted in severe erosion. PCB containing oils have been released to the environment from abandoned transformers. Abandoned and collapsing mine works and other deteriorating facilities and waste piles also pose significant physical hazards. In addition, the lack of a healthy soil structure and the poor quality of riparian and upland ecosystems contribute to poor surface water quality.

Presently the site is being investigated and cleaned up through a collaborative three party effort that was formalized on January 11, 2001, in a Memorandum of Understanding (MOU), and several related legal agreements, between EPA, the Tennessee Department of Environment and Conservation (TDEC), and OXY USA, Inc. (Glen Springs Holdings). The MOU provides an overall framework and establishes roles and responsibilities amongst the three parties for this investigation and cleanup work. It also provides assurance on the part of the federal government not to list, or propose to list, the site on the Superfund National Priorities List as long as other terms of the MOU are met.

Extensive data gathering activity has occurred in the past and additional sampling is planned for the Copper Basin in the near future. EPA and their contractors will conduct an RI/FS (remedial investigation/feasability study) under their superfund program for the Ocoee River; data will be generated that may be used for TMDL development. Administrative orders from EPA and commissioner's orders from TDEC will guide Glenn Springs Holdings toward cleanup of the North Potato Creek watershed and the study and improvement of the Davis Mill Creek watershed, both in the Copper Basin. Revegetation, reforestation, stabilization, water diversion and water treatment are all being considered, planned or implemented at present. Also, Glen Springs Holdings has voluntarily initiated or sponsored many cooperative projects and educational opportunities in the Copper Basin.

More information may be found at:
http://www.epa.gov/region4/waste/copper/index.htm
and at http://www.glennsprings-copperbasinproject.com

6.3.B. Nonpoint Sources. Many types of storm water discharges are considered nonpoint, and are not subject to NPDES permits mandated by federal regulations (see 6.3.A). Additionally, agricultural and silvicultural operations are generally exempt from water quality permitting in Tennessee except for large-scale animal farming or certain lumber industry activities that are defined by standard industrial classification codes. Nonpoint causes of adverse impacts in the Ocoee watershed such as siltation, pathogens, habitat alteration, pH, and metals may have many past and present sources

like logging, historical mining, waste storage, small-city urban runoff, livestock, agriculture, channelization, impoundments and contaminated sediments. The Tennessee Department of Agriculture (TDA), Division of Forestry, has implemented a "Master Logger" program for education and implementation of forestry best management practices (BMPs). TDEC and TDA along with federal agencies such as NRCS and the National Forest Service help agricultural and silvicultural operators with management tools and guidance that are designed to prevent erosion and other adverse impacts such as nutrient or pesticide pollution.

6.4. CURRENT AND FUTURE ISSUES

The Ocoee River watershed is one of the most unique in Tennessee. World class whitewater recreational waters and abundant natural scenic values are resources that invoke appreciation, protection and restoration. The restoration of the Copper Basin is a daunting challenge that finally has the hope of being achieved. Reforestation efforts over the past 25 years have changed the landscape dramatically along the highways and off into the previously barren lands. Much more can be done.

The restoration of water quality in impaired waters in the Copper Basin to a point where fish and aquatic life can survive and propagate is a goal that can be reached through cooperative efforts like those already underway and additional improvements from stakeholders and others in the watershed. Native fish are being introduced in the Ocoee watershed and many kinds of aquatic organisms have already begun their return to parts of the Copper Basin after a long absence.

Highway 64 relocation or improvement in the Ocoee watershed is being planned; this project presents a tremendous challenge for preserving and protecting the natural resources that exist or are being restored.

The massive amounts of sediment in the three TVA reservoirs on the Ocoee River present another challenge, due to the toxic metals that are present and the maintenance that is required to remove or flush sediments so that hydroelectric generation can continue. Flows, reservoir management and water quality are among the issues that will be part of TVA's comprehensive 2-year reservoir operations study that is already underway.

Watershed impacts from outside the Ocoee boundaries may play a significant part in water quality improvement planning. Stakeholders from these adjacent and upstream waters can help the restoration and preservation efforts in the Ocoee watershed.